

Title (en)

LOCK MECHANISM, LOCK SYSTEM, QUICK EXCHANGE BRACKET ASSEMBLY AND ELECTRONIC VEHICLE

Title (de)

SCHLOSSMECHANISMUS, SCHLOSSSYSTEM, SCHNELLWECHSELKLAMMERANORDNUNG UND ELEKTRONISCHES FAHRZEUG

Title (fr)

MÉCANISME DE VERROUILLAGE, SYSTÈME DE VERROUILLAGE, ENSEMBLE SUPPORT D'ÉCHANGE RAPIDE ET VÉHICULE ÉLECTRONIQUE

Publication

EP 4253133 A3 20240306 (EN)

Application

EP 23185313 A 20181229

Priority

- CN 201711486906 A 20171229
- CN 201711482898 A 20171229
- EP 18894253 A 20181229
- CN 2018125688 W 20181229

Abstract (en)

Provided is a lock mechanism, wherein the lock mechanism includes a lock base, the lock base is provided with an opening and a cavity extending from the opening, the opening is used for the lock shaft mounted to the battery pack to enter the cavity, the lock mechanism further includes: a lock assembly, the lock assembly is connected to one side of the lock base opposite the lock shaft, the lock assembly is moveable relative to the lock base, and the side of the lock base opposite the lock shaft extends into the cavity or exits the cavity; wherein, the lock assembly is capable of preventing the lock shaft from exiting the cavity from the opening when the lock assembly extends into the cavity; the lock assembly is capable of allowing the lock shaft to exit the cavity from the opening when the lock assembly exits the cavity. The lock mechanism is capable of preventing the install and lock of the prior battery pack from being easily failed, which may cause the battery pack to loose or fall off, so that the lock reliability of the battery pack is improved. Provided are also a lock system comprising the above lock mechanism, a quick exchange bracket assembly and an electronic vehicle.

IPC 8 full level

B60K 1/04 (2019.01); **B60L 53/80** (2019.01); **H01M 50/244** (2021.01)

CPC (source: EP IL KR US)

B60K 1/04 (2013.01 - EP IL KR); **B60L 53/80** (2019.02 - EP IL KR US); **E05B 47/0002** (2013.01 - IL US); **E05B 83/00** (2013.01 - IL US); **H01M 50/244** (2021.01 - EP IL US); **H01M 50/249** (2021.01 - IL KR); **B60K 2001/0455** (2013.01 - EP IL KR); **B60Y 2200/91** (2013.01 - IL KR); **B60Y 2400/112** (2013.01 - IL KR); **B60Y 2400/30** (2013.01 - IL KR); **E05B 2047/0016** (2013.01 - IL US); **E05B 2047/0067** (2013.01 - IL US); **H01M 2220/20** (2013.01 - IL KR); **Y02E 60/10** (2013.01 - KR); **Y02T 10/70** (2013.01 - EP KR); **Y02T 10/7072** (2013.01 - EP KR)

Citation (search report)

- [XAI] CN 105437945 A 20160330 - JASMIN INT AUTO RES & DEVELOPMENT (BEIJING) CO LTD
- [A] WO 2012052511 A1 20120426 - VALEO SECURITE HABITACLE [FR], et al
- [A] CN 106427514 A 20170222 - SHANGHAI DIANBA NEW ENERGY RESOURCES SCI & TECH CO LTD

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3733434 A1 20201104; **EP 3733434 A4 20210804**; AU 2018393463 A1 20200813; AU 2018393463 B2 20240125; BR 112020013375 A2 20201201; CA 3087454 A1 20190704; CA 3087454 C 20220118; EP 4253133 A2 20231004; EP 4253133 A3 20240306; IL 275745 A 20200831; IL 275745 B 20220601; IL 293320 A 20220701; IL 293320 B1 20240301; IL 293320 B2 20240701; JP 2021508639 A 20210311; JP 2022130367 A 20220906; JP 2022130368 A 20220906; JP 7081890 B2 20220607; JP 7289958 B2 20230612; JP 7294622 B2 20230620; KR 102312041 B1 20211012; KR 102381683 B1 20220401; KR 20200100186 A 20200825; KR 20210124508 A 20211014; MX 2020006898 A 20220726; MX 2021009289 A 20210908; MY 194234 A 20221123; PH 12020551017 A1 20210531; SA 520412388 B1 20221205; SG 11202006166V A 20200729; US 11359410 B2 20220614; US 2021277683 A1 20210909; US 2022268058 A1 20220825; US 2022275665 A1 20220901; WO 2019129288 A1 20190704; ZA 202004621 B 20220727

DOCDB simple family (application)

EP 18894253 A 20181229; AU 2018393463 A 20181229; BR 112020013375 A 20181229; CA 3087454 A 20181229; CN 2018125688 W 20181229; EP 23185313 A 20181229; IL 27574520 A 20200629; IL 29332022 A 20220524; JP 2020536591 A 20181229; JP 2022084647 A 20220524; JP 2022084648 A 20220524; KR 20207022032 A 20181229; KR 20217031306 A 20181229; MX 2020006898 A 20181229; MX 2021009289 A 20200713; MY PI2020003366 A 20181229; PH 12020551017 A 20200629; SA 520412388 A 20200628; SG 11202006166V A 20181229; US 201816958755 A 20181229; US 202217744723 A 20220515; US 202217744726 A 20220515; ZA 202004621 A 20200727